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## Neutrino Events at IceCube and the Fermi Bubbles

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**Abstract content**   
 (Max 300 words)   
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The IceCube Collaboration recently announced twenty-eight events were observed with energies above  $\sim 30$  TeV, more than expected from atmospheric backgrounds. We discuss the detectability of the Fermi Bubbles at IceCube and show that up to 4 – 5 of the 28 events could originate from the Fermi Bubbles (FB). If the observed gamma rays from the FB are created due to the baryonic mechanism, high-energy ( $> \text{GeV}$ ) neutrinos should be emitted as a counterpart. These neutrinos should be detectable as shower or track-like events at a Km3 neutrino detector. For a hard primary cosmic-ray proton spectrum  $E^{\sup>-2.1\sup>}$  and cutoff energy at or above 10 PeV, the Fermi Bubble flux substantially exceeds the atmospheric backgrounds. For a steeper spectrum  $E^{\sup>-2.3\sup>}$  and/or lower cutoff energy, to observe the neutrino flux at high significance, longer running time will be required.

**Apply to be considered for a student award (Yes / No)?**

Yes

**Level for award (Hons, MSc, PhD)?**

PhD

**Main supervisor (name and email) and his / her institution**

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**Would you like to submit a short paper for the Conference Proceedings (Yes / No)?**

No

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